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JEROME ALLEN, }

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THE change in the form and general make-up of THE JOURNAL seems to have met with the universal approval of its readers. The publishers were made quite certain of this by the replies to upwards of one hundred letters sent out by them in August last. THE JOURNAL has been fulfilling the function of a magazine of education, especially of advanced ideas of education, for a good many years, and a form that could be more easily preserved has become necessary.

It is not unusual for the editors to receive letters asking, "Who wrote——"; it is magnificent." Of course no specific reply can be made; it is sufficient to say that in common with other metropolitan papers, forcible articles are sought for, and are published without signature. The constant effort is to find forcible writers on educational topics—not far away topics, be it noted.

The advertising patronage bestowed on THE JOURNAL is often a subject of remark. During the first part of the twenty-one years the paper has existed, the larger publishing houses gave it business in order to second the serious attempt to build up a commanding educational journal worthy of this great metropolis. A large, general, influential circulation has been attained and it is now able to give efficient aid to those who have worthy objects to advertise in its columns. No educational newspaper ever presented such an array of advertisements as THE JOURNAL did on June 27, 1891. It showed that the paper had won, by its devotion to the educational field, the confidence of those who desire to reach that field.

"Schooling is not education," said *Archdeacon Wilson* in an address at Rochdale (Eng.) "The real education of our children is the home and the street, and so long as public opinion permits authorities to have certain neighborhoods in their present condition, so long will the home education of the children efface all impressions that can be made on them in school." There is nothing local in the immoral or unsanitary conditions that makes this statement a verity. America is none the less guilty of the inconsistency of putting all the responsibility of the child's education upon the teachers regardless of other detracting influences.

The Philadelphia wing of the University Extension movement is quite active, even reaching out beyond the parts adjacent to the Quaker city into parts beyond. Recently Professor George T. James addressed a citizens'

meeting of Yonkers. Such activity as is shown by Professor James in his work is certain to produce excellent results.

In arranging their system of public education the Japanese have copied many things we are trying to rid ourselves of, among which are empirical grading, the marking system, and cramming. It is said that the amount of verbal memorizing required by Japanese school teachers is so great that when a pupil leaves the lower departments she is required to study history, geography, mathematics, physics, chemistry, botany, zoology, French, English, music, painting, embroidery, national literature, and composing in prose and verse.

If these subjects were taught it would be well, but it is said that there is very little teaching talent displayed in presenting them. The Oriental plan of committing to memory is transferred from their old schools, unchanged, into the new. In other words the Japanese have seized our errors and transferred them bodily into their new national schools; and these errors are the very ones that Europeans have held in common with the Chinese and Japanese schoolmasters for many centuries.

It is not always the case that distinguished soldiers make distinguished teachers, but it is a fact that qualities of head and heart that make a soldier honored will also make a teacher beloved. We have an example in General Alexander S. Webb, president of the College of the City of New York, of a man who displayed distinguished personal gallantry in the war, and who has also shown great personal ability as an executive officer. It could hardly be said that General Webb is great in the recitation room, for he has not had much experience there, but he certainly is great in the president's chair.

The decree has gone forth throughout the world that sectarian instruction in the public schools must be dispensed with. On the first of October the boys' public schools of France were completely secularized. Last year of 52,000 teachers in these schools but 1,213 were members of religious orders. A similar change will take place in the girls' schools of France as soon as enough lay teachers can be secured to take the place of the sisters. Yet it is to-day a fact that of 44,000 women teachers, 11,000 are sisters. The conditions are so different in Europe from those in this country that we can hardly realize to what extent all instruction has been, and, to a great degree, now is, in the hands of the church.

In Cornell university the number of women students has considerably exceeded proportionally the total increase in the university attendance. President Adams says that a vast majority of the young women are devoted to the working out of great and noble purposes." Woman is

proving, not her right alone, but her ability to attend our best schools.

The colleges are full. The flood tide is upon them. Princeton has doubled its numbers within a few years. and Harvard reports this fall four hundred and fifty freshmen. But what are our great schools doing for the lower schools? Nothing. The graduate of Columbia would as soon wash dishes for a living as become assistant in a New York public school, and who ever heard of a Yale honor man entering a state normal school, and studying the kindergarten and manual training? The typical Pharisee in education is the average college graduate. How earnestly he prays, "Lord, I thank thee that I am not like that poor school-marm, obliged to drudge ten hours a day for forty-seven dollars a month. O Lord, how thankful I am!" This fellow's mental eyes have never been opened, for his benighted intellect, in reference to education, is like a kitten's before it can see. The colleges need pedagogics, but not of the high and lofty sort, that discusses the weightier matters of Greek philosophy and Roman jurisprudence, and lets the method of infant education, primary science, and the intermediate teaching go to the dogs. Our college graduates are like the rich men of whom Christ declared they couldn't get into heaven. The fundamental principles of educational science have been seen only by the great men like Pestalozzi, Froebel, Comenius and La Salle, who were willing to get down to the little child. To the lowly Pestalozzi came views of teaching that the most learned men of his time, like Humboldt, and Fichte were glad to know about, and when they learned they saw what all their greatness had not found out.

Never before have the youth of our country had such opportunities for thorough college training. Higher advantages are within the reach of all men of all classes. Now is the college man's opportunity, but is he able to seize it? Results will tell.

Dr. Thomas Hill has been for fifty years a student of our school system, and now in the maturity of his years his opinions carry with them great weight. His conclusions are: first, there is too much rigidity in the graded system; second, teachers make a mistake of beginning the training of the reason too early; and, third, the schools confound the true order of development, and attempt to make the human plant bear seed before it has borne flowers and almost before it has budded. These are flat-footed statements. Are they true? The verdict of thousands both this side the Atlantic and the other says they are. Teachers know the truth in the matter. Those who have read THE JOURNAL know its opinions. Who does not acknowledge the harm that comes from sticking too closely to a graded system? But what shall be done? Many things; and these remedies will be pointed out on these pages this present year. The suggestions already made are bearing fruit; but we must not stop. "Forward" is the motto of progress. Probably Colburn's Lessons, an excellent text-book in its place, has done a great deal of harm because put in the hands of too young pupils.

Dr. Hill has told why. Then take the third point—the true order of studies. What should be better known than how the mind grows and what sort of food it needs at each stage of its development? It is a most hopeful

sign that the number of mind students is increasing each year.

There is much food for thought in the suggestions of Dr. Hill, which should be carefully considered at the commencement of this school year, by teachers everywhere who are looking forward to the speedy emancipation of our systems of teaching from the empirical ways of the past.

The founding of the University School of Pedagogy in this city, met with expressions of satisfaction from all who have been hoping to see the means of higher professional education brought within the reach of teachers. Did we say all? Three notes of dissent have been heard? The *Syracuse School Bulletin* first derided this effort. *Intelligence*, of Chicago, followed its lead, and the *Public School Journal*, of Bloomington, Illinois, brings up the rear. It seems that the eminent ex-chancellor of the university, Howard Crosby, almost with his dying breath, must have made a mistake when he said that "the establishment of this school is the most important step the university has made in years." It would further seem that that life long educator, Dr. Barringer, of Newark, and Dr. Langdon S. Thompson coming with a noble reputation won in the West, and Dr. Charles R. Abbot, the eminent principal of public school No. 1 in Brooklyn, as well as many others, must have been demented to have given three years of study to the masters of education. Stanley Hall must have been mistaken when last spring before the Superintendents' Association at Philadelphia he gave the school strong words of approbation. To please these eminent editors the hands on the dial of progress must be turned back more than the fifteen degrees Hezekiah was satisfied with. They would say, "Turn them clear round."

A recent advertisement in an English denominational paper read as follows: "A cultured, earnest, godly young man desires a pastorate. Vivid preacher, musical voice, brilliant organizer. Tall, and of a good appearance. Blameless life. Very highest references. Beloved by all. Salary, £120." How would it look for a teacher to advertise himself as follows: "A cultured, earnest, sincere young man desires a situation as a teacher. He has a vivid manner, musical voice and is a brilliant organizer. Tall, and of good appearance. Blameless life. Very highest references. Beloved by all. Salary \$600." What American teacher would dare to do that?

Dr. Peabody has entered upon his work as director of the educational department of the World's Fair. He will endeavor to give the school exhibits of this and other countries such a unity that comparative values can be seen at a glance.

A hearty reception was given last Tuesday to Superintendent Brooks of Philadelphia by a large number of teachers and directors, who promised that if he would be to them their Moses, they would be to him his Aarons and Hurs.

The new superintendent of the Chicago schools, Albert G. Lane, has proved his eminent fitness for his new position by many years of successful work as director of the Cook county schools. He has been Col. Parker's right hand man, and is a downright and upright advocate of whatever he considers to be good.

Books and Reading.

It is not enough to get books; they must be read. Food in the shop, will not keep a family from starving; it must be cooked, eaten, and digested. It is so with books. When a book gets into the hands of a teacher he must ask several questions:

1. What is there in it for me?

This question can only be answered by studying it. If on examination it is found that there is nothing in it, get rid of it as soon as possible. It will be a waste of time and energy to have anything to do with it.

2. How can the value of a book be determined?

Ordinarily, recommendations are of little use. Ink and paper are cheap, and time with some is not valuable. If a capable man is known to be strictly honest in what he writes about a book, his word can be taken for a conclusion. But the best way is to look into the book and so form an independent judgment. A book will show at a glance whether it is in the line of helpfulness. A work on photography will not tell the principles of school government, neither would a book on science tell how to teach mathematics. *Adaptability* is a good law to follow. Never buy a book because it is cheap, or nicely bound. Some books are made to sell, others for show, and others to use. A good book is to a teacher what a good tool is to a carpenter.

3. Beware of "practical" books. They have their use; for example, a simple manual of gymnastics, or the sloyd, or some other subject immediately applicable to special school work, is good, if it can be applied, but a book promising to tell just how to teach spelling, or reading, or what special way to use in stopping whispering is generally a snare and a delusion. "The letter killeth, but the spirit giveth life."

4. Get thoughtful books.

There are histories dry as dust and about as suffocating. Why? Because they give little but dates and names. History—true history—is thoughtful. This means that it shows how thought has influenced thought; how one thinker has started into life other thinkers who have gone beyond his thought. Ruskin is thoughtful; so is Emerson and Carlyle; but these men have written in such a style that only cultured minds can read them. Bulwer's "Last Days of Pompeii" is a thoughtful and truthful book, and withal very interesting.

5. Read over a book you like many times.

Read it aloud. It is said an author used to pay a man a good salary to hear him read and give him his criticisms. Two are better than one. A friend by your side is a wonderful stimulus. Companionship in books is not possible without companionship in persons. You must talk about what you are interested in if you expect to keep your interest. A solitary Robinson Crusoe is of little account until he gets his man Friday, but companionship must be appreciative. A dull, unsympathetic hearer is worse than none. Blessed be the man who has a good companion. Solitariness is generally selfishness.

6. Write what you read.

Writing makes an exact man. How much can the average teacher write concerning the Revolutionary war? Not much, unless books were frequently consulted. A person doesn't begin to realize how little he knows until he writes what he knows. When you write don't read. Do one thing at a time.

7. Own only the best books.

A library filled with chaff makes a poor showing. Many large libraries in our country are poor in gold and wheat. Very few books published amount to a row of pins. Throw them away or have a closet for them up stairs, but cherish, honor, and love a good book like a dear child. Said a dying author, "My dear old books, how I love you!" To love a book is almost like loving a friend.

There is as much difference between a teacher that is natural and one that is artificial, as between the growing cedar and the polished pillar. The former is constantly varying, but the latter from its constant sameness becomes uninteresting.

Practical Arithmetic.

By BENJAMIN F. LACY, A. M., B. S., Philadelphia High School.

In spite of the great advances made in education, arithmetic still continues to be a bugbear to both teacher and scholar. This clearly indicates an unnatural state of affairs.

The most important faculties of the mind are those which give man the greatest aid in the struggle of life—which bear most directly on perfect living. If this is so—and who can doubt that it is?—those subjects which contribute most perfect living, and of necessity call into action the most important faculties, are best adapted for both use and discipline. From these considerations we may conclude that discipline can be accomplished by immediate attention to use.

When the idea of mental training is the main consideration to the empirical educator, he presents knowledge in such ways that its acquirement is fraught with difficulty. Difficulty soon seems to be a virtue, and in its turn becomes an end to be sought. This, of course, can best be accomplished by violating the fundamental principles of education, and they are duly violated.

In tracing the lot of arithmetic we find a special application of what has been said. Its advantages as a disciplinary study were early recognized. This caused it to be put in the list of those subjects pursued mainly for the sake of the discipline they afforded. As its practical side became more and more obscure, its treatment became less and less practical. The difficulty necessarily attending such pursuit of the study suggested the idea of the intrinsic merit in complicated problems. Who can wonder that the arithmetic class became one of torture when the wits of the teacher were continually prodded to perplex the mind of the scholar with all the amazing intricacies of which numbers are capable? Some of the problems dealt with facts, abstractions, and quantities beyond the conception of the pupil, others with unfamiliar terms, and not a few were ambiguous. "Catches" became the order of the day and were considered an excellent test of proficiency. The affairs of an average life never could put numbers in such strange relations as an ingenious teacher.

What answer can a poor little innocent make to this question?

"Johnny, when asked his age, replied that if 2 years be added to his grandmother's age she would be just 6 times as old as he, and that $\frac{1}{2}$ of his mother's age equals $\frac{1}{3}$ of that of his grandmother. Johnny's mother is 32, how old is he?" Surely the most natural reply is that he must have been very, very old to talk like that.

This attempt to produce mental acrobats was not entirely unsuccessful. On "Exhibition Day" not a few were brought forward to delight the admiring audience with their wonderful feats. So scholars were graduated who could give the answers to very peculiar problems, but their minds were so trained to the extraordinary that they found delight, to the exclusion of better employment, in searching for the strange and unnatural, and became like spirits of another and very different world. Not only did their training unfit them for the affairs of this plain and work-a-day existence; it gave them a disgust for such as well.

Such views were not limited to those who could accomplish surprising feats, nor to aspirants, but spread to the uneducated and to those who were more useful than ornamental. They were so general that their denunciation by educational reformers was not sufficient to overcome them. All those who were raised according to them were predisposed to argue in their favor. The hardest to convince is he who has an attachment to error. The old problems were classics; they were associated not only with early triumphs, but with the fire-side and the "good old times." The overthrow of these time-honored "sums" seemed the overthrow of the subject itself. That the children of a certain age could not do this or that with numbers, was sufficient to condemn any system.

Traces of the old idea of the vital importance of arith-

metic may be seen in the depriving of the scholar of advancement in his other studies on account of not having reached a fixed standard in this one branch. Surely the experience of after life would not warrant this extreme measure.

Where efforts have been made to teach *practical* arithmetic, the subject has lost much of its terrors to both teacher and scholar. This plainly shows us the direction that reform must take—and as we have seen, is taking, in order that the good work may be completed.

In the lower schools we can only hope to fit children for that part of life that is common to the majority. If we wish to make mathematicians of them, we must wait until they are prepared for the higher deductions. Food that cannot be assimilated is not conducive to growth.

Recess or no Recess.

By OSSIAN H. LANG, Buffalo, N. Y.

Many of our American cities have abolished the general recess, and as a superintendent has put it, "greatly to the satisfaction of *all concerned*." I am inclined to doubt whether "all concerned" are satisfied; at least the children are not, and, if they work hard and faithfully during school hours, they cannot be satisfied. Not the question whether the school-board, the teachers, the janitor, or the people that live in the neighborhood of the school, are in favor of the abolition of recess, but the question whether the interests of the children warrant such a step, ought to decide in the matter. Allow me to quote from the abolitionists:

"What quarrelsome notions there are among children, usually culminate at the recess period. Besides, time is lost, clothing injured, school property impaired, accidents precipitated, sickness often superinduced by exposure to extremes of heat and cold, and through excitement and over-exercise, school work seriously disturbed by an interval of relaxation suddenly beginning and calling for an equally sudden return to study; and in a moral aspect also, there is some objection to throwing a large number of children, old and young, out together." We certainly cannot blame our friends for objecting to such a recess; but, instead of doing away with it altogether, they might have tried to *reform* it. This can and has been done in many schools; the results show that the recess, if rightly conducted, forms an important part of the educational program of the school, and is a gain rather than a loss of time. If the time of recreation has been devoted to lively, but not boisterous, exciting and overheating, playing, under the supervision of a good disciplinarian, the children will return to work with refreshed minds and bodies. Fresh air and the freedom of the playground are healthy stimulants, and in the hour that follows the enjoyment of both, all will work the better for it. This gain is, certainly, great enough to make recess desirable.

But there is another and more potent reason why recess should not be abolished. The nature of the child cannot endure prolonged confinement and close attention to study. *Exertion must be relieved by amusement.* The physical and psychical health of the child depends on the observance of this law. The program of the school must, therefore, make allowance for intervening periods of relaxation and recreation.

School-room calisthenics do not furnish the child with sufficient exercise to relieve the strain of mental activity. The primary teacher of the no-recess schools will tell you that many of her "best" pupils are complaining of nervous headache, in spite of all calisthenic drill. This is easily explained. For, no matter how well the school-room may be ventilated by artificial contrivances, if the children are confined to it for two hours or more in succession the air becomes unfit to breathe, as the oxygen is used up faster than it can be supplied. Moreover, systematic physical drill, although forming an important and most necessary branch of instruction, is not intended to take the place of recess and can never fully replace it.

In recess the children are at liberty to enjoy them-

selves according to their own pleasure, providing they keep in the proper limits. This freedom is an essential part of amusement. Amusement, however, is an indispensable want of childhood, as it gives the most beneficial relief to the working mind.

In a moral aspect, also, there is much *in favor* of recess. But it is sufficient to know that the physical and psychical constitution of the child asks for an intermission between the hours of physical and intellectual exertion.

The Stereoscope in Geography.

By E. E. K.

The stereoscope has been urged in print more than once as an aid in giving geographical concepts. It is of especial value in the heart of a crowded city, where the poorer children have to depend chiefly upon hearsay for their notions of what the country looks like. It should not be used with very young children, for fear of injuring the eyes with a wrong focus. Fourth year pupils ought to be able to tell whether the scene appears as it should to them and to learn the art of adjusting the distance. Then the woods and roads and streams and valleys and mountains are brought before them with a reality only lacking color. The most difficult and important thing has been accomplished—namely, the establishment of correct notions of geographical forms, proportions, and distances. Colored landscapes, supplementing the use of the stereoscope, ought to furnish the mind pretty well with true geographical ideas, although nothing can equal views of the country itself.

The School Room.

OCTOBER 17.—EARTH AND NUMBERS.
OCTOBER 24.—SELF AND PEOPLE.
OCTOBER 31.—DOING AND ETHICS.
NOVEMBER 7.—LANGUAGE AND THINGS.

Teaching English Literature. II.

By PROF. F. V. N. PAINTER, Salem, Va.

THE STUDY OF ANGLO-SAXON.

The purpose of the present article is to recommend the study of Anglo-Saxon as a help to understanding English grammar.

The Anglo-Saxon language prevailed in England from about the year 500 to 1100. Within this period the Anglo-Saxon people, who came into England from northwestern Germany as heathen, embraced Christianity, established monasteries, founded schools, and encouraged letters. The Anglo-Saxon epic "Beowulf" received its present form; the poet Caedmon wrote a paraphrase of portions of the scriptures, in which there is here and there a Miltonic touch; and the great King Alfred, with wise devotion to the welfare of his people, turned works of religion and philosophy from Latin into the vernacular tongue.

The Norman conquest in 1066 introduced an important change. With the accession of William of Normandy to the English throne, the French language became that of the ruling class for three hundred years. Gradually, through the association of worship, war, and daily life, the Anglo-Saxon and the French coalesced, and gave as the result substantially the English of the present day. In the fourteenth century the new tongue was taught in the schools, employed in the courts of law, and used by Chaucer in his imperishable poetry.

Of this new language, for such it deserves to be called, the Anglo-Saxon remained the basis. The French and all other foreign elements are simply engrafted upon it as the original stock. Though modified in many particulars by the introduction of this large foreign element, yet the Anglo-Saxon gave character to the resultant tongue, determining its grammar and furnishing the greater part of the words in daily use. All inflections, numerals, pronouns, prepositions, and conjunctions are Anglo-Saxon. The names of ordinary objects, ideas, and feelings—the heavenly bodies, the elements and their changes, the divisions of time, objects in nature, degrees of relationship, words of childhood, terms peculiar to household, farm, and trade, verbs of simple bodily action and motion, fundamental sensations, emotions, and passions—are all classes of words coming from the Anglo-Saxon.

What are the changes that Anglo-Saxon underwent by contact with the Norman French? To describe all in one phrase, it passed from a synthetic to an analytic condition. The Anglo-Saxon is a

highly inflected language like the modern German, with which it is closely related in origin. Many relations now expressed by prepositions were formerly expressed by case endings. There were several ways of forming the plural and a moderately complete system of personal endings in the verbs. What little characteristic grammar now belongs to English is a relic of Anglo-Saxon. Hence without some acquaintance with the original tongue, our knowledge of present grammatical forms will remain more or less superficial.

Let us take a few examples by way of illustration. Anglo-Saxon had two principal terminations to indicate the plural,—*as* and *es*.

After the Norman conquest these endings were reduced to *es* and *en*, and subsequently the termination *es* or *s* became the ordinary sign of the plural. This is the origin of our present plural form. In the word *oxen* we have a relic of Anglo-Saxon plural in *an*. What are sometimes called irregular plurals, as *man, men, foot, feet*, are instances of the vowel change known as *umlaut*. The terminations, marking the possessive case, is the Anglo-Saxon Genitive, which ended in *es*. Its use was originally confined to the singular of masculine and neuter nouns, but was afterwards extended to feminine substantives and plural forms. The mode of comparing adjectives with the suffixes *er* and *est* is Anglo-Saxon. The personal endings of the verbs, *st* and *eth* are remnants of the Anglo-Saxon forms. The study of Anglo-Saxon throws much light on etymology and syntax. Such words as *gospel, nostril, nightingale*, and many others, have a fuller meaning when their component parts are understood. Such sentences as these from "The Lady of the Lake"—

"Woe worth the chase; woe worth the day.
That cost thy life, my gallant grey,"

present no difficulty; for the student of Anglo-Saxon recognizes *worth* as meaning *to be*, and *chase* and *day* as nouns in the Dative case.

A standing argument for extended courses in Latin and Greek has been the etymological use of those languages. It is to some extent a valid argument for giving them a place in the curricula of our high schools and colleges. But the same argument applies with greater force to the study of Anglo-Saxon, which, as we have seen, lies at the basis of our present English. It is gratifying that in this matter the better reason of educators is prevailing over the practice of medieval tradition. In nearly all of our colleges Anglo-Saxon now receives a reasonable share of attention.

This brings us to the practical point of the present paper. We recommend to the teachers in the public schools of our country to acquaint themselves to some extent at least with the language of our forefathers. This may be easily done. An hour a day devoted to some elementary work, such as Sweet's "Anglo-Saxon Primer" will in a few weeks familiarize one with the leading facts of grammar. This is not enough, of course, to make an Anglo-Saxon scholar. But this is not necessary. A slight knowledge of leading principles, such as may be acquired in a short time, will serve to throw much light on English grammar. It will give confidence to the teacher, and impart a new interest to his work.

Studying Asia.

(PRODUCTION MAPS.)

(Class about 13 years of age.)

We shall begin the study of Asia in a week, and I would like to have you bring any products of that country that you may find and place them on this Japanese tray in the corner of my desk.

What a collection! Rice, tea, cotton, a little bamboo basket, all kinds of spices and grains, a sandal-wood fan, cardamoms, arrow root, indigo, sago, attar of roses, picture of a mulberry leaf, tobacco, flax, hemp, olives, gold and silver in the ore, ivory, coffee—everything but diamonds. I wonder why somebody didn't bring diamonds? You smile, but you have shown so much energy over getting these together, that I wouldn't be a bit surprised to have seen diamonds here. What is this? (pulling out a card that was tucked away under the other things.)

"A card that contains the name of things I couldn't find—"
That is an original idea, Kate. I'll read it aloud:

Some Products of Asia.—Poppies for opium, roses for perfume, gamboge tree for paint, oily nut for India ink, mulberry for silkworms, pearls, diamonds, strawberries, coconuts, mangoes, melons, and others.

KATE JOHNSON.

Your faces show how you have enjoyed making this collection, but I should like to know where you found about all these things.

They are not all in your geography by any means. Where did you look?

"I hunted up my Boys' Travels."

"I went to the cyclopedia."

"I went to the public library and got a book on Asia, and I know about their manufactures there, too."

That will come later. But you deserve credit for doing all this so quietly that I never heard a word till I was introduced to Asia this morning. How many were surprised to find out how much we were indebted to Asia for the common things we use every day? I thought you would be. Asia is just our neighbor "over the way," that we borrow and lend with.

"I went through our house one day last week to see how many things we had from Asia."

"And I told them all at the dinner table what we had on the table from Asia, while we were waiting for dessert."

That is just what I want you to do. Open your geographies and let us study the proportion of Asia to learn to draw it. Lay your pencil across the length. The width. Which part is larger? Measure diagonally from East Cape to Cape Aden; how does that compare in length with the other? Lay your pencil across the three points of the southern peninsula; which points farthest? Now look steadily at the whole map for two minutes to get the proportion in your mind. Take the blunt end of your pencil and follow the general outline—not too slowly—and pay no attention to the indentations now. Do that half a dozen times till you get the general plan in your mind. Fred and Susan may go to the board and give that same general sweep of the whole outline—class criticise. I want volunteers. Now we have enough of a general idea to take the molding board. I will mold from this large outline map, and I want to be watched and criticised closely. Where shall I begin? "Throw up the Ural mountains." Wouldn't it be best to select the Altai mountains first for a back bone? (The remainder of the lesson is given to the molding of Asia with an eye to the drawing of the outline for the next lesson, and particularly to the location of mountain ranges and valleys to find reasons for the variety of climate and productions.)

See how many of these outlines of Asia you can make on your slates in leisure moments before to-morrow.

I wish you might make fifty. To-morrow when I come back to school, I would like to find two outline maps on the board for the afternoon lesson, and I will select the best one for our first "production map." Locate the equator in relation to Asia, and you may try to add the ocean currents, too, for all these things affect climate and productions. I want you to know the *why* as well as the *where* about Asia.

Science-Arithmetic.

(EIGHTH GRADE.)

By ELLEN R. JACKMAN.

(This article is one of a series that will illustrate the present teaching in the Cook Co. normal school, Chicago. It will be remembered that in THE SCHOOL JOURNAL of June 20, it was stated that the tendency in this school was to maintain a unity in all the subjects of study; that geography, physics, chemistry (mineralogy) were subjects which underlie and form the basis and explanation of physical life. It is a foundation idea with Col. Parker that there is but one subject of study, and that is LIFE, physical, mental, and moral.)

During the eight years of school life below the high school, the average child studies arithmetic; and yet it is a fact that after all the attention given to this study the grossest ignorance prevails in its application to the affairs of life. We do that thing well which has for us a present, vital interest. Such problems as, "A has \$500 and lends B 20% of it; how much has A left?" have no interest whatever to the child. Such arithmetic, as a subject of study and as a means of discipline, is of no more value than any other ordinary puzzle. Nearly all the arithmetic now taught consists of a series of such puzzles with the interest which the puzzle-maker usually puts into his problems omitted. It should be the function of arithmetic to render the knowledge gained from real subjects of study more clearly defined to the mind, by measurement, limitation, and definition.

The real subject of this lesson was purely one of science, that of botany and arithmetic was employed merely to enhance the pupil's concept concerning the nature of fruits.

THE LIFE PROBLEMS OF SCIENCE.

The problem presented in this case by science was this: How much fluid, how much dry solid, how much ash, and how much organic matter in each of the following fruits: apple, peach, pear, grape, watermelon, tomato, and to this list the potato was added. The school was divided into groups, each group, being given a fruit for special work. The fruit was first weighed, then cut, except in the case of the grape, into slices, and placed in a moderate oven and allowed to dry slowly without burning.

When thoroughly dry it was again weighed and the amount lost by evaporation was found. The dry solid, in some cases a fraction of it, was then placed over an alcohol lamp in a small crucible and reduced to fine ashes, and this, the mineral part, was weighed. When the data had been so collected the pupils of themselves saw the necessity and the advantage of comparing the

results obtained in the various experiments, and it only remained for the teacher to indicate and teach the best arithmetical process or this purpose. Naturally the work fell chiefly under the head of percentage, though it will be seen that the drill in the use of fractions was excellent. To illustrate the work of the entire class of forty the results of the study of the grape are given in detail:

Weight of whole grape is 5 grams.

Weight of dried grape is 1.5 grams.

Weight of water is 3.5 grams.

Weight of organic part, *i. e.*, that lost by burning the dry solid, 1.1 grams.

Weight of mineral part is .4 grams.

Will some one ask a question without performing any operation?

"The weight of the water, 3.5 grams, is what per cent. of the weight of the whole fruit, 5 grams?"

What does 5 grams represent?

"5 grams represents the weight of the whole fruit or 100 per cent."

Let us find a concise expression for the proportion of water in the whole fruit. Who will give the analysis?

"5 grams are 100 per cent., 1 gram is 20 per cent.; therefore 3.5 grams are 70 per cent. of the entire weight."

What, then, does the 70 per cent. represent?

"It is the amount of water, or that which has evaporated."

Is 70 per cent. more or less than half?

"More."

What per cent. was left in the fruit, and what does it represent?

"30 per cent. the weight of the dried part was left."

What have you now found?

"That 3.5 grams are 70 per cent. of 5 grams; also that 1.5 grams are 30% of 5 grams."

How can you prove that this answer is right?

"70 per cent. of 5 grams must equal the weight of the water. 1 per cent. of 5 grams equals .05 grams and 70 per cent. equals 3.5 grams, which was found before to be the weight of water."

There is another way of proving that your result is correct. What is it?

"3.5 grams equal—70 per cent. of what number of grams? 1 per cent. equals .05 grams, and 100 per cent. equals 5 grams which we found before to be the weight of the entire fruit."

What else do we wish to find about the fruit?

In answer to this question the following problems were given at this and succeeding lessons, each helping to enhance the concept of the fruit.

The water is what per cent. of the dried fruit?

Dried fruit is what per cent. of the whole fruit?

Dried fruit is what per cent. of the water?

Whole fruit is what per cent. of the dried fruit?

Whole fruit is what per cent. of the water?

Mineral matter is what per cent. of whole fruit?

Mineral matter is what per cent. of the water?

Mineral matter is what per cent. of dried fruit?

Whole fruit is what per cent. of mineral matter?

Dried fruit is what per cent. of mineral matter?

Water is what per cent. of mineral matter?

Organic matter is what per cent. of the whole fruit?

Organic matter is what per cent. of dried fruit?

Organic matter is what per cent. of water?

Organic matter is what per cent. of mineral matter?

Whole fruit is what per cent. of the organic matter?

Dried fruit is what per cent. of the organic matter?

Water is what per cent. of the organic matter?

Mineral matter is what per cent. of the organic matter?

In the lesson given the three cases of percentage have been taught:

Base and percentage given to find rate.

Base and rate given to find percentage.

Rate and percentage given to find base.

What One Teacher Did. I.

By E. D. K.

It was an ordinary school-room, having a platform, the usual teacher's desk, one or two chairs, and some curtains that had been rolled up and pinned by the last teacher and the children till a row of pin-holes dotted them (the curtains not the children) from top to bottom. The whole place was as unattractive as a spot could be, where children were expected to *like* to come and be very happy after they got there.

The new teacher had her own ideas how a school-room ought to look. But where could she begin? Her purse was a great deal lighter than her heart as she thought of spending the next ten months in that unattractive place. She had her plans for a new cloak that winter; she had not supposed it was possible to get along without it. But as she stood alone in that silent school-room there rose up a determination to sacrifice the cloak and "fix up" her room. She first found somebody to scrub floors and windows. After that she silently laid the perforated curtains in

the basement and went to "the store" and bought new ones with a yellow tint that would look pretty with the sun shining through. Fixtures were too ambitious. She stitched the curtains herself after paying a few cents to the carpenter for window sticks.

Several things were accomplished by the next move; for she happened (?) to make the acquaintance of the "terror" of the school, who had been annually "turned out" for several winters, and pressed him into service to "help put up the curtains." By the time they were "up," she had a chivalrous youth at her service now and evermore. But the curtain ambition was not yet satisfied. She adored window drapery. Why shouldn't she have some? Again the "store" furnished some cream colored scrim for eight cents a yard and again she had recourse to the sewing machine. Another doubtful boy was added to the helpers this time, and in an hour every window was draped. How pretty they looked with folds looped back with fresh ribbon at a few cents a yard!

The blackboards came next. Sponging removed dust, if not cracks; two spare corners and some colored crayons were found, and soon a bunch of golden-rod, sketched by skilful fingers, found its *vis-a-vis* in a spray of oak leaves and acorns, prettily outlined on the other side.

What was the use of that platform lifting her above the children when she wanted to be *with* them? She could not remove that, but the desk went down to hobnob again with the old curtains in subterranean freedom, and a little cheap table was placed in front, that was nearly covered next day, legs and all, by the square of scarlet flannel that she bought and "feather-stitched" herself the night before, "after tea." A "remnant" of carpet, costing \$2.42 was nailed down next day over the platform, giving such an air of comfort to the room that the "new cloak" sacrifice began to look very small in comparison.

The bare walls began to complain of neglect. What was to be done? She would *not* have poor pictures to educate the children the wrong way and she could not afford good ones. An idea struck her. She would make a humble beginning and trust to fortune for the rest. At a drug store she found a picture frame that had been used for advertisements, which they were glad to give away. Some long, ornamental grass grew by the roadside. Gathering a handful and buying a piece of cardboard for ten cents she went home. She had saved a pasteboard picture of a stork one day, to "carry to school for the children," and in her mind's eye, she saw a picture grow out of this combination. It grew and was finished. A dignified stork stood waiting on the regulation "one foot" in a tangle of high grass. Hung in the school-room next day it was a bit of naturalness that was surprisingly pretty.

The "annually suspended" stood on the shoulders of his bosom friend and looked into the school-room window that night after the teacher had gone and said: "I say, Bill, she's got a new picture, and I'll bet yer she made it herself. She can jest do anything."

The Grasshopper.

By Fanny A. STEBBINS, Springfield, Mass.

(This exercise was given with a class of the fifth year.)

This morning, children, we will study the grasshoppers which you have brought to me. First you may look for his head. Which of your drawing solids does it remind you of? Yes, it is *somewhat* "like the ellipsoid," but I thought of another. Not "the oval," but—yes, "the ovoid."



Now look at the part of the body back of the legs. What is its shape? Yes, and what do we see here which is not on "the cylinder?" Those "circles," as you call them, divide this part of the body into what we will call segments. You may count these segments. "Nine," "Seven." "There are eight that I can count that go all around the body; then at the end it looks as if there were two more."

Yes, there *are* ten of these segments. We shall want a name for this part of the grasshopper; it is called the abdomen. (Writes the word on the blackboard.) Between the head and abdomen you will find a third part. What can you say of its shape? It is "irregular." We call this part the thorax. James may name the parts of the grasshopper's body, in order.

We want to think about the size of these parts. Tell me which is the longest. Yes, where in the length of the whole body do you find the division between the abdomen and thorax?

Yes, and of the half remaining, what part does the head occupy? How many think it is one-fifth? How many think it is one-fourth? It is "about one-fourth."

Now let us see what is on the head.

"I find two long feelers." The word feelers might mislead you as to their use, for wise men tell us that they are organs of smell, and not really to feel with; so we will call them *antennae*, not feelers.

You may see if the antennae are smooth or rough?

"Oh, Miss S., they are like a string of beads, all close together!"

Look at their size. "They look about as big as a thread, but the beads are bigger out at the end than they are near the head."

"Are those big things on the side of his head his eyes?"

"They are ever so much bigger for the size of his head than our eyes are."

Yes, and they are very different from our eyes; you cannot see any pupil or white part in his eye. Do you suppose he can wink? Why not? Can he keep the dust off his eyes?

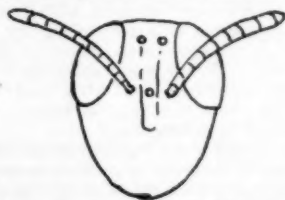
Each one of these big eyes is made up of hundreds of little eyes. Look on the grasshopper's face. What do you find half way between the two antennae? See if you can find any more "spots" near the upper part of the head. Yes, there are "two more there." These three spots are really three more eyes, but these we will call simple eyes; the others you remember are compound.

Why does the grasshopper have so many more eyes than we do? Well, suppose he had two eyes placed in his face as ours are in our faces, couldn't he see around in as many directions as we can? Some think he could; others think he could not. Charlie, what is the reason you think he could not? How many think he can not turn his head as easily or as far as we can turn ours?

We have only a few minutes more but we will begin our picture of the grasshopper. Place him in as natural a position as possible with his head at the left. Make your drawings twice as big as the specimen. Draw the vertical lines to show how long the sketch is to be. Where shall I sketch the line to show where the abdomen is joined to the thorax? To show where the head joins the thorax? Show the shape of each of these three parts taking care to tell what is true of their width.



You could not show the position of the eyes and antennae very well in that view so you may draw a picture of his face. What is the outline of his ovoid head? You may draw the oval, moving first as in your drawing lessons. Show how large and what shape the large eyes are. Show just where the three simple eyes are. Now show the position of the antennae, and their length.



You have found some things to-day, children, that are new to you; to-morrow we will get still better acquainted with our grasshopper.

Changing Fractional Form.

FROM COMMON TO DECIMAL.

By F. M. T.

Name three decimal fractions.

"Five tenths, sixteen hundredths, four hundred forty-six thousandths."

Express in both the common and the decimal forms.

$$\frac{5}{10} = .5$$

$$\frac{16}{100} = .16$$

$$\frac{446}{1000} = .446$$

What must the denominator of a decimal fraction always be?

"Ten or some multiple of ten."

Can I express $\frac{1}{5}$ as a decimal? "No." Why not? "Because its denominator is not a multiple of ten."

But $\frac{1}{5}$ is equal to what decimal fraction? "Five tenths." Then let us express it thus:

$$\frac{1}{5} = \frac{2}{10} = .2$$

What number did we multiply the denominator by in order to change it to tenths? "Five." If I multiply the denominator by

five, what must I do with the numerator? "Multiply that by five also." Why? "If both terms of the fraction be multiplied by the same number, the value of the fraction remains the same."

Express $\frac{1}{5}$ in the decimal form.

$$\frac{1}{5} \times \frac{2}{2} = \frac{2}{10} = .2$$

How did you change the form of the fraction $\frac{1}{5}$? "By multiplying both terms by 2."

Change $\frac{1}{5}$ to tenths.

$$\frac{1}{4} \times \frac{25}{25} = \frac{25}{100} = .25$$

Change $\frac{1}{4}$ to a decimal, avoiding the fraction.

$$\frac{1}{4} \times \frac{25}{25} = \frac{25}{100} = .25$$

Change $\frac{1}{4}$ to thousandths.

$$\frac{1}{4} \times \frac{250}{250} = \frac{250}{1000} = .250$$

Change $\frac{1}{4}$ to thousandths. How do we find what we must multiply eight by? "By dividing 8 into 1,000." What then is the multiplier? "125."

Express the work.

$$\frac{1}{8} \times \frac{125}{125} = \frac{125}{1000} = .125$$

One-seventh equals how many tenths, hundredths, and thousandths?

$$\frac{1}{7} \times \frac{10}{10} = \frac{10}{70} = .1\bar{4}$$

$$\frac{1}{7} \times \frac{14}{14} = \frac{14}{98} = .14\bar{2}$$

$$\frac{1}{7} \times \frac{142}{142} = \frac{142}{1000} = .142\bar{8}$$

Express $\frac{1}{7}$ as tenths and hundredths.

Express $\frac{1}{7}$ as tenths and hundredths.

$$\frac{1}{3} \times \frac{3}{3} = \frac{3}{10} = .3\bar{3}$$

$$\frac{2}{3} \times \frac{3}{3} = \frac{6}{10} = .6\bar{6}$$

$$\frac{1}{3} \times \frac{33}{33} = \frac{33}{100} = .33\bar{3}$$

$$\frac{2}{3} \times \frac{33}{33} = \frac{66}{100} = .66\bar{6}$$

(Give many drills with special attention to halves, fourths, eighths, thirds, fifths, etc., that these more common forms may become familiar and finally memorized.)

Change $\frac{1}{4}$ to tenths.

$$\frac{1}{4} \times \frac{25}{25} = \frac{25}{100} = .25$$

Change $\frac{1}{4}$ to a decimal, avoiding the fraction.

$$\frac{1}{4} \times \frac{25}{25} = \frac{25}{100} = .25$$

Change $\frac{1}{4}$ to thousandths.

$$\frac{1}{4} \times \frac{250}{250} = \frac{250}{1000} = .250$$

One-seventh equals how many hundredths, tenths, and thousandths?

$$\frac{1}{7} \times \frac{10}{10} = \frac{10}{70} = .1\bar{4}$$

$$\frac{1}{7} \times \frac{14}{14} = \frac{14}{98} = .14\bar{2}$$

$$\frac{1}{7} \times \frac{142}{142} = \frac{142}{1000} = .142\bar{8}$$

Preparatory Work in Geography. I.

By MARY R. DAVIS, Springfield, Mass.

(Time:—a rainy day. Material:—sandboard, a piece of water-soaked rock, and a basin of water.)

Children, what kind of a day is this? "A rainy day," yes; can you think of any other rainy days? Were they all like this one? How many think they were? No one; but how were they different?

Frank remembers "a day when it rained very hard." Mary thinks of one "when it rained a little most all day in little tiny drops." How many remember our last rainy day? That's good; well, was that day like this? "It was warmer," and "rained harder;" then, on which day will most rain have fallen?

How many ever noticed the shape of the rain-drops? Are they all alike? All of the same size?

"Sometimes they are in large drops not very near together;" "sometimes in little round drops." Yes, like mist. "Sometimes you can't see any drops; it just pours down."

From what direction does the rain seem to come? Willie thinks "it comes straight down from the sky;" how many agree with him? About half of you. What has little Elsie to say?

"I think it sometimes comes from that direction (pointing south), and sometimes from that way" (north), "because the raindrops come against that side sometimes" (south), and sometimes against that window" (north).

Elsie is right, now from what direction is the rain coming to-day? Which window-panes are washed? (All point north.)

Right; do the drops come straight down then, as Willie said?

"No, they come slanting;" what drives them in different directions? Yes, "the wind," and you could tell me, I presume, many funny stories of trying to carry an umbrella when it was blowing hard.

Is this a warm or a cold rain? Then, from what direction do you think the cold rains come? Yes, "from the north or northeast." Which window-panes were washed during our last rainy day? (All point south.) You said "that was warmer," than this, so which wind brings us warm rains? "The south winds." Right.

Does the water seem to flow as swiftly in the gutter to-day? "No." "There isn't so much of it," "It isn't so muddy." Why was it so muddy? Does the stream flow faster during a heavy or a light rain? "During a heavy shower." Yes, but in which rain does the water seem more muddy? How many remembered to look at that hill (near the school-house) after our last heavy shower? Almost all? That's good; now, what did you notice about the stones, pebbles, sand, etc.? "The hill was washed clean." "The big stones were left near the top of the hill." Good; what did you find farther down? Yes, "pebbles," and then—"sand," and, what was carried farthest? "Mud." Yes, what becomes of the mud?

Which does the most good to the soil, a slow, drizzling rain or a heavy shower? Yes, "a drizzling rain;" now, which washes or wears away the hill fastest?

What becomes of water that falls on soft ground? (Teacher pours water on the sand or sand-table.) Yes, "it soaks in"; but how deep does it soak? How deep does *this* water soak? "To the table." Yes; now can you think of anything that might stop the water that soaks into the ground? Ah! John has it, "rock stops it." In what direction will the water then flow? In what direction does it flow here on the table? "The way the table slants;" yes, so the water that soaks into the ground must flow in the direction the rock slants or *slopes*.

Does all the water that falls soak into the ground? "If it flows the way the hill slants" or *slopes*; what little stream may we find at the foot of the hill, where so many tiny streams flow together? "A brook."

Will the pools of water in the yard remain? What becomes of the rain when it falls on rock? Does it ever *soak* into rock? You all think not, yet here is a piece of rock wet on the inside (showing a piece of water-soaked rock). How did the water get there? Yes, "it soaked in," water *does* soak into some kinds of rock.

What becomes of the water that lodges in little hollows in a rock? Yes; "it dries up," or *evaporates*. Does all the rain that falls on rock either "soak in" or "dry up"? That's right, "a part," the *greater* part "flows off the rock on to the ground."

Now, does the rain do any good to the earth? To the plants? To the animals? Yes, "it does good to all," and you will find that the warm, drizzling rains are the growing rains for plants. You see our Creator *thought* what was best in everything.

Does the water that has soaked into the ground ever come up again? I see none of you know, and I didn't expect you could tell me to-day; but, you may try to find out and tell me some other day.

(Lessons on climate in the primary grades should consist of simple observation lessons from day to day, on rain, snow, sleet, hail, dew, frost, fog, clouds, the lighting and heating of the earth, direction of winds, etc., leading pupils to notice which winds bring warm rain and which cold; thus preparing pupils for the more advanced work on some subjects, and the teaching of radiation and conduction of heat, evaporation, and condensation, etc., in the grammar grades.)

Reckoning Percentage.

By E. D. EDWARDS.

Percentage reckoning in all its applications may be successfully taught by the demonstration and use of the three formulas given here. Pupils should constantly be reminded that (1) the *whole* base is either named in the problem or is to be obtained, and its *exact whereabouts* and relation to the other elements given or to be found must be ascertained before they can intelligently proceed to solve; (2) that each element, as base, percentage, difference, or amount, has its *corresponding rate* (or fraction), like Siamese twins, inseparable.

These facts pupils take pleasure in noting, and they become helps to the *certain* solution of the problem.

The following formulas indicate solution after the *thinking* has been done, and *not till then*.

COMMON FRACTION METHOD.

1. Given, *whole* and *any fraction*, \times to find *corresponding part*.
2. Given, *any part* and *corresponding fraction*, \div to find the *whole*.
3. Given, *any part* and *whole*, \div to find *corresponding fraction*.

OR,
1. Given, BASE and any RATE, \times to find *corresponding element*.

$$\$1,000 \times \left\{ \begin{array}{l} .05 \text{ small percentage} \\ .95 \text{ almost } 100\% \\ 1.05 \text{ more than } 100 \end{array} \right\} \left\{ \begin{array}{l} \$50, \text{ percentage.} \\ =950, \text{ corresponding difference.} \\ 1050, \text{ amount.} \end{array} \right.$$

2. Given, any ELEMENT and corresponding RATE, \div to find BASE.

$$\begin{array}{r} \$50. \\ 950. \\ 1050. \end{array} \left\{ \begin{array}{l} .05 \\ \div .95 \\ 1.05 \end{array} \right\} = \$1,000.$$

3. Given, any ELEMENT and BASE, \div to find corresponding RATE.

$$\begin{array}{r} \$50. \\ 950. \\ 1050. \end{array} \left\{ \begin{array}{l} .05 \\ \div \$1,000. = .95 \\ 1.05 \end{array} \right.$$

PROBLEM.—A man loses 5% upon an investment and has \$950 remaining. What sum was invested? Is *all* he had (whole) given "No, sir." How much is given? "A little less than *whole*." What element is it? "Difference." Is its corresponding rate given? "It is not." How may we obtain it? " $100-.05=95$." What shall we do? " $\$950 \div .95 = \$1,000$."

Number-work for First Primary.

By DELLA JUSTINE LONG, Santa Barbara, Cal.

(Children standing around number table on which are different objects.)

How many would like to play at keeping store this morning? And who would like to be the storekeeper? Oh, we can't all keep the store, or there would be no one to buy the things! Fred may have it first—storekeepers ought always to be wide-awake people. Come around to your side of the counter, Fred, and Nelly may come to buy the things that a little girl in the first grade is sure to need for her very own. Yes, she would need a slate, a pencil, a sponge, and a reader. How many things have you sold to her, Fred? Yes, four things. Now if all the little girls standing by my chair go shopping, how many children will you have in your store? Yes, "four children." You may each buy one thing.

"I want to buy a pencil." "I want a sponge." "I want a marble." "I want a top, if you please." Who asked the most pleasantly? How many things has Fred just sold, Florence? Yes, four things, but tell me all about it.

"A pencil, a sponge, a marble, and a top are four things."

John may come to the counter and find two spheres and two cubes for me. How many solids have I in this hand, children? How many in this hand? Now count them so softly that no one can hear except yourself, and when you can tell me all about what I have, raise your hand. Roy may tell. "Four solids." Well, Anna, what do you think? "Two cubes and two spheres are four solids." That is better, and now if Fred sells two white crayons to May, and two red ones to Alice (they come for the crayons), who can make a little story telling me how many they have? "Alice has two crayons and May two more, so they both have four crayons." That is good; and now we will watch May draw two straight white lines, and Alice may draw two curved red lines. Tell me about what you see, Maud. "I see four lines—two red ones and two white ones."

Now hold the crayons up high so we can all see them, while Maud changes one of the white ones for another red one. How many red crayons has Alice? How many white ones? Tell me, children. "Alice has three red crayons and one white one." How many has she in both hands? Yes, four crayons. If Fred sells Harry the three biggest marbles he can find in this box, and I give him this tiny one, how many will he have, Nelly? Yes, he will have four marbles. Then when Harry rolls the three big ones across the table to John and the little one after them, how many will John have? Yes, he will have four marbles. Can you tell me how he got so many? "Harry gave him three first, and the little one made four." Good! And now we will close the store, and the storekeeper may stand with the people who have been shopping, while we think how many separate things Nelly bought. Florence remembers. Can you write something at the board that will tell us all?

(Florence writes: $1+1+1+1=4$.)

Come and choose four things another way, Fred, and tell us about it. (Fred holds up two balls and two spheres and writes: $2+2=4$.)

And who knows still another way to make four? Show us at the table first, Maud. (Maud lays three splints in a row with another under them, and writes: $3+1=4$.)

Now I will tell you a little story about the four ones: I threw some crumbs to the sparrows this morning, and the father bird came first, and then the mother bird came, and then a little one and then another little one, and so there were four sparrows. And I stood so still watching them that they never saw me, and ate all the crumbs. Now can you tell me a story of your own about making four another way? Harry looks as though he knew a very good one. "My father caught two fish yesterday, and when

we went down to the river after supper, we found two more on the lines." Good! Then how many fish did you have for breakfast? "We didn't have them for breakfast, we had them for dinner—all four."

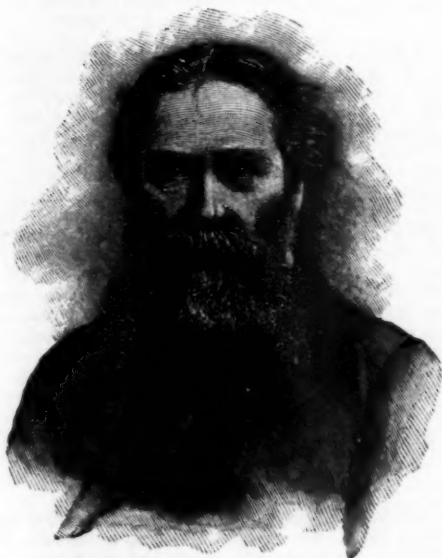
And now we know still another way of making four. Who is ready with a story? Well, Maud. "I put my dolls—." "How many dolls, Maud?" "Three of them, in the hammock this morning, and Nelly brought hers, so there were four dolls." That is good. Tell yours, Alice. "Florence and Jessie and Lulu were in the park yesterday, and when I went there were four of us."

Look at the board, children, and tell me what we have written. Now look at me and tell me again, softly. (They repeat :)

$$\begin{aligned} 1+1+1+1 &= 4. \\ 2+2 &= 4. \\ 3+1 &= 4. \end{aligned}$$

And now will you try to remember the pleasant things that happened to-day, so you can tell me some of them to-morrow in new stories?

Supplementary.



J. R. Lowell

James Russell Lowell was born in Cambridge, Mass., February 22, 1819. Both father and mother were people of much culture and education, and from his cradle the child who was to be a poet heard poems read and books talked about. The Lowell home was a roomy yellow and white house surrounded by trees. In the large garden grew lilacs, syringas, ribbon-grass, and other sweet old-fashioned flowers. Birds were almost as numerous as flowers and the little boy made friends with both. Some charming things about birds are said in an essay called "My Garden Acquaintance."

His education was begun in his father's library. He prepared for college at a school in Cambridge, and entered Harvard in his sixteenth year. After graduating he studied law, and began his practice in Boston. Literature was more to his taste, and he soon brought out a volume of poems. A second book was published three years later, and shortly after his first prose work.

The Mexican war gave him a theme for "Biglow Papers," a long dialect poem dealing with the political questions of the time. It was very popular at once. "The Fable for Critics" is a satire upon contemporary authors, in which he did not spare himself. The "Vision of Sir Launfal" was published soon after.

This poem is founded on the legend of the "Holy Grail," which is the name for the cup Jesus used in the last supper with his disciples. The story goes that after the crucifixion the cup was carried to England. Only those who were perfectly pure in thought, word, and deed, could have charge of it, and when one of its keepers failed to keep this condition it disappeared. After that the bravest and best of King Arthur's knights went in search of it. Sir Launfal's success is told in this beautiful poem.

When Longfellow resigned the professorship of modern languages in Harvard university, Lowell filled his place. For a

number of years he worked constantly. For five years he edited the *Atlantic Monthly*, and for nine years was connected with the *North American Review*. During this busy period, another volume of poems, "Under the Willows," and "Among My Books," volumes of literary and critical essays, were also published.

During the Civil war Mr. Lowell published the second volume of "Biglow Papers," which had been begun years before during the Mexican war. The great Commemoration Ode was written about ninety-three students of Harvard college who died in the war.

In 1877 President Hayes appointed Mr. Lowell minister to Spain, and three years later transferred him to England. He gave great satisfaction to America and England, and some of the leading English journals called his the most successful term filled by an American minister.

Mr. Lowell died at his home in Cambridge, August 12, '91, of a lingering illness. The funeral was a very quiet one, and he was buried in the family burying-ground at Mt. Auburn. A memorial service was held at Westminster Abbey, where an oration was delivered by Canon Farrar.

Lowell was hardly a poet, in the full meaning of the word. He lacked the rhythmical sense and the refined "word-taste" necessary to poetic expression. He wrote his best verses by main strength, yet with such a noble purpose that the lesson is impressed and the commonplace words are overlooked.

A Chain of Quotations.

1. All that hath been majestic
In life or death since time began,
Is nature in the simple heart of all,
The angel-heart of man.
2. And what is so rare as a day in June?
Then, if ever, come perfect days;
Then heaven tries the earth if it be in tune,
And over it softly her warm ear lays.
3. Each day the world is born anew
For him who takes it rightly.
4. Be noble! and the nobleness that lies
In other men, sleeping, but never dead,
Will rise in majesty to meet thine own.
5. Though the cause of evil prosper,
Yet 'tis truth alone is strong.
6. He's true to God who's true to man.
7. 'Tis heaven alone that is given away,
'Tis only God may be had for the asking.
8. Whom the heart of man shuts out,
Sometimes the heart of God takes in,
And fences them all round about
With silence 'mid the world's loud din.
9. The sea is lonely, the sea is dreary,
The sea is restless and uneasy;
Thou seekest quiet, thou art weary,
Wandering thou knowest not whither.

Which Loved Best?

"I love you, mother," said little John;
Then, forgetting his word, his cap went on,
And he was off to the garden swing,
And left her wood and water to bring.

"I love you, mother," said rosy Nell;
"I love you better than tongue can tell."
Then she teased and pouted full half a day
Till her mother rejoiced when she went to play

"I love you, mother," said little Fan;
"To-day I'll help you all I can;
How glad I am that school don't keep,"
So she rocked the baby fast asleep.

Then stepping softly she brought the broom,
And swept the floor and tidied the room.
Busy and happy all day was she,
Helpful and happy as a child could be.

"I love you, mother," again they said—
Three little children going to bed.
How do you think that mother guessed
Which of them really loved her best?

—Selected.

The Educational Field.



Dr. William A. Mowry.

Dr. William A. Mowry was born in Uxbridge, Mass., and educated in Phillips academy and Brown university. After his early teaching in Massachusetts and Rhode Island, he became principal of the English and scientific department in Providence high school for five years. He resigned this position in 1864 to establish the well-known "Mowry and Goff's" English and classical school in Providence, R. I., of which he was senior principal for twenty years. In 1884 he withdrew from active teaching to become editor of the *New England Journal of Education*. During the last few years he has edited *Education and Common School Education*, the latter having been established by him in 1887.

Dr. Mowry has been a valuable and popular institute instructor in all the Eastern states, and in Pennsylvania, Ohio, and Tennessee. He has written widely for papers and magazines, and is the author of "Studies in Civil Government," and "Elements of Civil Government," two successful text-books. "Talks with my Boys," by the same author, has gone through three editions. As popular lecturer at lyceums and on public occasions Dr. Mowry has been deservedly successful. Thoroughly informed in his subjects, magnetic in personality, possessing an exhaustless fund of anecdote and an abounding sympathy with his audience, he has been warmly received and remembered as a public speaker.

He was a member of the school board of Providence for six years, refusing a re-election, and has ably served for the last three years as a member of the Boston school board. Besides a membership in various historical societies he has been a member of the National Council of Education since its organization. Dr. Mowry is now superintendent of the schools of Salem, Mass.

The outcome of the free education experiment in England is giving much anxiety to private school-masters. In Bradford, all the lower public schools are free. In these schools are seventy departments with about 25,000 scholars. Of course these free schools are strongly opposed by private enterprises. The ardent supporters of the established church oppose these free schools, for they are seriously injured by them. A recent circular was distributed on their behalf which said: "If our friends value the work of our church schools, and will support us, we hope to be able to carry them on. If not, then they must be closed. We have reached a crisis in our voluntary schools, and we must act at once." The conflict is raging all over the civilized world between churchly enterprises with payment of fees and state schools supported by public tax.

It will be remembered that Mr. Grasby in his recent book on "Personal Notes of the Educational System of the World," spoke in terms of high recommendation of the methods pursued at the Cook Co. normal school. THE JOURNAL will publish a series of articles, commencing with this number, illustrating some of the methods pursued in this school.

It has been suggested that the teachers in French elementary schools should wear a distinctive costume; the object being to check the extravagant toilettes in which some of the schoolmistresses indulge, to the great injury, it is alleged, of the pupils

"Extravagant toilettes" with American teachers is not a threatening evil—with present salaries.

The high school at Summit, N. J., is encouraging the reading of English classics as a part of their education. This reading is credited to the pupils in making up their standard. A canto of Spenser's "Faerie Queene," for instance, makes up a fortnight's reading and introduces the student to the Elizabethan era of poetry.

The United States bureau of education has been making a comparative study of national systems of education, and has completed several concise statements intended to exhibit the working systems of the most important countries of Europe. This work will be continued during the present year, and it is hoped the bureau will be able to complete a practical survey of education in all parts of the world.

Dr. Harris, commissioner of education, says that the usefulness of his bureau depends directly upon what it publishes and distributes, and he therefore recommends that his estimate of \$30,000 for general printing for the year 1892-'93, recently submitted, be favorably acted upon, and makes a special request for an appropriation of \$20,000 to continue the series of educational histories of the several states. It is certainly much to be hoped that his request may be granted.

What is known as the "Faribault Experiment," recently noticed in our columns, seems to come nearer a successful way of solving the Catholic educational question than anything before suggested. In Faribault the buildings in which several of the schools are kept belong to the church of the Immaculate Conception, and are rented to the city for one dollar a year. The schools are continuing on as they were before the transfer was made; the teachers wearing the dress of the order in the Catholic church to which they belong. It is agreed that no religious instruction shall be given during school hours, but, as the buildings belong to the church, there is no reason why they should not be used out of school hours as the owners please. All of the teachers are examined by the city superintendent, attend all the teachers' meetings, and are required to keep their schools up to the teaching standard prescribed by the city board of education. There seems to be no objections to this arrangement. It doesn't matter what sort of dress teachers wear, provided they keep good schools; neither does it matter what kind of religious teaching is given out of school hours, provided children are not obliged by law to attend it. The great thing to be secured is thorough instruction in all the branches prescribed by the state, and unsectarian management.

A member of the Boston school board, at a recent meeting, asked that 1,230 crickets, blocks, or stools be provided for the smaller children of the schools in his division, as they were unable to rest their feet on the floor. Why do we not hear more about this feature of the hygienic care of children? If every teacher of small children will give a little time to ascertain how many pairs of feet are dangling between heaven and earth, she will be amazed at the number. Not much consistency in getting up a furore over any system of calisthenics, while the children are allowed to sit with swinging feet or cramped knees.

The school year of the normal department of the Kentucky state college, opened Sept. 9, 1891. Two courses are offered, The Teachers' Review and Preparatory Course and The Professional Course. The first course can be completed in five or ten months. The second course comprises two years and leads to a professional degree of "Bachelor of Pedagogy." Teachers who successfully complete this will have had a thorough drill in modern pedagogy.

The primary school teachers in Brooklyn, who have been receiving \$525 and \$575 a year, are to have an increase of \$125, and the teachers in the low grammar grades will get an increase of from \$50 to \$150.

The program of the teachers' meetings of Chanute, Kansas, S. W. Black, superintendent, allow time for the discussion of some prominent author, for pedagogics, for celebrated teachers, for the history of education, and for ways and means. It is evident that the teachers of this new city mean business.

Mrs. Alice Freeman Palmer says that there are to-day 40,000 girls in the colleges of America.

A correspondent thinks that "Ninety-nine women out of every hundred are densely ignorant as to physical things."

Commissioner Harris considers schools to be efficient in inverse proportion to the number of cases of corporal punishment they have.

George Ross, minister of education for Ontario, has excluded the teaching of sewing from the girls' schools in his jurisdiction on the ground of its being a hindrance to the girls in the cultivation of the mental faculties.

Dr. Jackson, government superintendent of schools in Alaska, reports that education within the Arctic circle, is in a flourishing condition. Schools have been established at Point Barrow, Point Hope, and Cape Prince of Wales.

The commissioner of education reports that in the elementary and second grade schools there are in attendance 12,686,973 pupils. This is 20.27 per cent. of the population in 1890. The total amount expended for public school purposes, during the last school year was \$140,277,484, a sum so large as to be beyond comprehension as a whole.

Some crank in Dakota, whose head is just big enough to comprehend that the concrete in education is valuable, while the abstract is worthless, figured out one day that it would take a kettle four hundred miles wide and three hundred miles high to boil the potato crop of Dakota at one time. This created so much interest in his school that next week he announced that if the babies born in Dakota during the past year could be placed side by side in a circle, they would enclose a space as large as the state of Massachusetts, that when they cried they could be heard two hundred miles, and that it would take one thousand three hundred and twenty-seven barrels of milk every twenty-four hours to feed them. The people of his district failed to comprehend the force of this illustration, called him a crank, and started him along to the next school vacancy.

Dr. William H. Maxwell, superintendent of Brooklyn public schools, gave a lecture on Wednesday last before the Brooklyn Teachers' Association on "The Literature of Education." It was full of clear discrimination and good advice.

A gentleman wanting change for a dollar stepped into a drug store and with diffidence asked the young man who was cashier: "Can you let me have silver for a dollar bill?" "Yes! and am glad to," was the answer. Now that "glad to" did not take any appreciable time; but it made a very great difference in the response. The gentleman took pains to come in again, this time to purchase. He looked the young man over; and hearing of a vacancy recommended him. Civility is worth having as a part of one's stock in trade.

Three of these girls say they go to school regularly," remarked the "little judge" in the police court as four children were about to step down. (A fourth girl stood at one side.)

"Aren't they all together?"

"No, sir," answered one of the trio. "Us don't belong to she."

What? Who goes to school—was that sentence correct?"

"No, sir."

"What should she have said?"

"Her ain't one of we."

"Horror! The next try it."

"She ben't one of us three."

The fourth girl, who had said nothing about school, replied, "She is not one of us."

"You are discharged." "The others will have a chance to study in a reformatory."

The primary edition of THE SCHOOL JOURNAL of September 26, is a number of exceptional value for primary teachers. Every effort to improve primary work is an effort to improve the entire system of education. You are certainly doing the cause of education great good.

Sayville, L. I.

ASHER J. JACOBY.

I read English, French, and German educational papers, but have not found one more readable, nor as replete with valuable suggestions, as THE SCHOOL JOURNAL. You are doing a great service to the profession.

Buffalo.

OSSIAN H. LANG.

New York City.

Miss Pierson, of this city, announces the reopening of the Female Senior evening school, in grammar school No. 13, 17th ward, and rings out these earnest words to the girls:

"STUDY—If you would give satisfaction in your present position.

STUDY—If you intend to seek a better position.

STUDY—If you want to make your home and family better and happier.

STUDY—If you wish to gain respect among your friends and employers.

STUDY—If you have any high, noble, or lofty purpose for yourself or others. "For knowledge is power."

The Messrs. Goldthwaite, of *Goldthwaite's Geographical Magazine*, were perhaps the most unfortunate losers in the recent fire on Fulton St. Not only was every electrotpe printing plate of the back numbers of the magazine destroyed, but a large number of rare maps and engravings were lost. The Goldthwaites were indefatigable collectors of such works, and their collection of old and rare maps was one of the finest private collections in the United States, if not in the world. This cost them not far from \$20,000 and it was their intention to reproduce and publish many of these that had educational value. Of this entire collection one solitary map, an early map of New York, remains.

Saturday is becoming a busy day for teachers in this city. At the College for the Training of Teachers, there will be lectures on (1) Educational Psychology, (2) Art of Teaching, (3) Natural Science, Zoology, and Physiology, (4) Form Study and Drawing, (5) Domestic Economy, (6) Mechanic Arts. Fees, \$10 to \$15. All begin October 10. Also a general course of twelve lectures will begin January 7; and a class for mothers October 28.

The Saturday morning class which met Mrs. S. D. Jenkins at 9 University Place (College for Training Teachers) for its first lesson in specific instruction in methods of teaching, course of '91 and '92 was unusually large. More than twice as many presented themselves as for the same course one year ago.

Superintendent Alex. E. Frye, writes from San Bernardino, Cal.: "We have just lost two school-buildings by fire. But before the last spark was extinguished I had a force of men at work preparing another building for school use and when the sun rose on the next day, we were ready. *Not a minute was lost.* That is the way schools are booming here. I have an ideal.

The Whitewater (Wis.) normal school now occupies a new building with model appointments. A new gymnasium will soon be added. Three new teachers, Miss Klingensmith, Miss Spear, and Miss Goetsch are giving excellent satisfaction.

The pupils and teachers of Cook Co. normal school celebrated the fifty-fourth anniversary of Col. Parker's birth-day, October 9. Miss Rice and Miss Baber have just returned to the normal from a five months' trip in Europe.

The Superintendents and Principals' Association of Westchester county, met at Yonkers, Oct. 20, president Frank B. Taylor in the chair; about thirty in attendance. Mr. C. P. Brower, of West New Brighton, opened the discussion on compulsory education. Resolutions were adopted that an educational commission should be appointed to consider necessary changes in the school laws of New York. The subject of uniform grading and course of study for the graded schools of the county, was also taken up for discussion with unanimous approval of such a course. A committee of nine, including the school commissioners of the county was appointed to confer and report results at next meeting of association. "The Criticism of Teachers' work by the Principal" was the last topic considered. It was the general opinion that this should never be done in the presence of the pupils. This meeting as a whole was a most excellent one. The interest and ability shown by Westchester county teachers argues well for the leadership of that county in school affairs.

Educational Associations.

The Michigan State Teachers' Association, Grand Rapids, December 21, 22, and 23.

Minnesota State Teachers' Association, St. Paul, December, 28, 29, and 30. Horace Goodhue, Northfield, Minn., president; F. A. Fansworth, St. Paul, Minn., corresponding secretary.

The National Educational Association, Department of Superintendence, Brooklyn, N. Y., February 16, 17, and 18, 1892. Hon. Henry Sabin, Des Moines, Iowa, president; Supt. L. W. Daly, of Cleveland, O., secretary.

Western Prudential Association, Brandon, Oct. 1 and 2. Mr. Maguire, secretary.

State Teachers' Association, of Ill., Dec. 29 to 31, 1891, at Springfield. Principal Alfred Kirk, Chicago, president; J. M. Bowlby, Metropolis, secretary.

State Teachers' Association of Kansas, Topeka, Dec. 29, 30, and 31. Supt. E. S. Spence, Wichita, Kan., president; Mrs. Menninger, Topeka, secretary.

State Teachers' Association of Michigan, December, Supt. W. W. Chalmers, Grand Rapids, Mich., president; O. R. Schurtz, secretary, also of Grand Rapids.

State Teachers' Association of Wisconsin, Jackson, December 28 to 30. Prof. R. W. Jones, University of Miss., president; Prof. J. Wooten, Oxford, Miss., secretary.

State Teachers' Association of Vermont, December, Prof. Ranger, of Lyndon Centre, Vt., president.

State Teachers' Association of Wisconsin, December 28 to 31. Supt. John Nagle, of Manitowoc, president; Mr. H. L. Terry, of Lake Mills, Wis., secretary.

North Dakota Educational Association, December 22, A. L. Woods, of Graton, president; Miss Etta C. Lewis, of Devil's Lake, secretary. Association meets at Grand Forks, Dakota.

State Teachers' Association of South Dakota, Mitchell, Dec. 29, 30 and 31. G. L. Pinkham Miller, president; Esther A. Clark, Yankton, recording secretary.

State Teachers' Association of Massachusetts November, Friday and Saturday immediately following Thanksgiving. James T. Barrell, Supt., Cambridge, Mass., president; Charles Parmenter, Cambridge, secretary.

The State Teachers' Association of Vermont, Montpelier, October 29, 30, and 31. Rhode Island Institute of Instruction, Providence, October, 29, 30, 31.

Correspondence.

A subscriber writes to us: "The conductor of our institute presented the following table to the teachers; he was telling them 'how to teach history:'"

1607, Virginia was settled at Jamestown by the English.
1614, New York was settled at New York by the Dutch.
1620, Massachusetts was settled at Plymouth by the Pilgrims.
1623, New Hampshire was settled at Little Harbor and Dover by the English.
1633, Connecticut was settled at Windsor by the English.
1634, Maryland was settled at St. Mary's by the Catholics.
1636, Rhode Island was settled at Providence by Roger Williams (English).
1638, Delaware was settled on Christiana creek by the Swedes.
1660, North Carolina was settled on Chowan river by the English.
1664, New Jersey was settled at Elizabeth by the Dutch.
1670, South Carolina was settled on the Ashley river by the English.
1682, Pennsylvania was settled at Philadelphia by William Penn (English).
1733, Georgia was settled by James Oglethorpe (English).
He says: "Have this table thoroughly memorized. Drill on it in concert as you would on a poem. It will be the key of the period of colonization which will unlock the other interesting thoughts."

The writer asks our opinion as to this method of teaching history to children.

(We unhesitatingly condemn it, as being at war with the first principles of pedagogy. The amount of time wasted in false and wrong methods of teaching, is too great to be expressed in figures if minutes were the basis; in per cents. it would be 50 per cent. to 75 per cent. This plan would rank as high as 90 per cent., "Drill on it as you would on a poem." Horrible! Still, just such work as that will be done for fifty years; there is one thing to be thankful for,—there is less of it done than once was. That table is good to have in an encyclopedia.—EDS.)

To what extent are recesses,—afternoon and forenoon,—still maintained or discontinued? 2. Chief arguments pro and con.

We should say the larger part of the schools still continue the old form of recess, but it is only just to say that the cities which have adopted the "no recess" plan, do not return to the old fashion. The converts of "no recess" by taking exercise in the school-room maintain that the health of the children is not imperiled by the sudden change into cold air; that the discipline of the school is better secured by avoiding the usual troubles arising from recess; and that the necessary exercise can be had inside the school-room with change of air. The "no recess" is usually popular with pupils, as the school session is proportionally shortened in length.

The conservatives who keep up the old-fashioned recess maintain that children need the change of air and the opportunity to run, shout, and work off the superfluous energy of child life.

It is a very common occurrence among the patrons of ungraded country schools, to reject the teaching of manual training. Is it right, under such circumstances, for the teacher to insist upon teaching it?

No; Do not insist upon teaching it. Quietly work on public sentiment and circulate such manual training literature as would open their eyes to the truth.

Will you please give a good course of reading for a primary grade teacher to pursue during the coming year?

I have read Talks on Teaching, Quincy Methods, Seely's Grube Methods, Johnson's Education by Doing, Hailmann's Primary Methods, Quick's Educational Reformers, Mistakes in Teaching, Securing and Retaining Attention, Badlam's Suggestive Lessons in Reading and Language, Perez's Early Years of Childhood, Science of Writing, Lessons on Color, Page's Theory and Practice, Calkins' Object Lessons, Old Mother Earth, Her Highways and Byways. Most of these I own and have the opportunity of studying. The course I ask you to recommend I wish to have include a good work on Psychology and Moral Science, also Principles of Education, and a few books which would better fit me to impart an all-around education to my pupils.

Read Welsh's and Sully's Psychologies, Porter's Moral Science, Johannot's Principles and Practice of Teaching, Tate's Philosophy of Education. The way these are read will depend upon how much thought F. C. F. can bring to their study. Psychology is of little use to many teachers because they do not know how to

study it. One kind of study of psychology and the principles of education will become a positive detriment to the student; another kind invaluable benefit. We cannot point out the exact difference between these methods now; the subject will be discussed in the columns of THE JOURNAL, but we can insist that the student of educational psychology shall know how to proceed before he commences. This is axiomatic. Theoretic and dogmatic psychology is a snare and delusion, but applied psychology is an unspeakable blessing to the capable teacher.

What would you advise as the best way of ruling slates for the beginners in writing in the first year of school?

This is a matter in which such difference of opinion exists that we should be glad to have some correspondence from experienced teachers on the subject.

For the teacher whose classes are not supplied with suitable supplementary reading I will tell what has been a great help to a class of mine.

I bought one copy of King's Picturesque Geographical Readers, Each day before the afternoon lessons are commenced I have one child read five or ten minutes, each child taking his turn in reading from the class roll. All listen. Most are interested in the reading. Already I can see that some who have been the hardest to interest in a reading lesson are anxious for their turn to come. Besides the direct result aimed at they are acquiring a liking for books. The first book of the Geographical Readers is just what I need for the interest it is arousing in geography. For those who do not need the help in geography any useful or interesting book read in the same way will be of lasting benefit to the children.

Your ingenuity is to be commended—but would it not be better not to have the pupils read in regular succession? It would then give a little element of interest and wonder as to who would read next.

Will you give me some information concerning the railway system of South America?

South America has a greater number of short railways than any other country in the world; ninety of them aggregate less than one thousand miles in length. These, as may be surmised, extend from seaports to towns a few miles inland. The largest road will extend from Buenos Ayres to La Paz, Bolivia. It is now completed from Rosario to the Bolivian boundary. A branch will extend from Sucre and Patosi to Autofagasta, Chile. A branch is already built from La Paz to Autofagasta. The Transandine railway, from Buenos Ayres to Valparaiso will be open to traffic in January. About one mile of tunneling remains to be done before connections are made. Argentina has now nearly 10,000 miles of railway in operation; Brazil has about 6,000. Buenos Ayres will soon be one of the leading railway centers in the world. The highest railway in the world at present is that which crosses Cumbre Paso; it is over 12,000 feet above sea-level.

J. W. REDWAY.

1. Has there been a law passed that after 1892, teachers will be obliged to take a normal course in order to obtain a certificate? 2. With whom must a teacher communicate, in order to get her name on the list of pupils sent to a state normal school? 3. Can you mention some good books from which I can learn to draw? 4. What book is best from which to learn "Methods or School Economy"?

1. We do not know of the existence of any such law.
2. In New York state, the school commissioner of the district in which the pupil resides. In other states, the county superintendent may be communicated with.

3. You must know that you cannot learn to draw from a book. Let us suppose that you admit this fundamental proposition, what then? You must begin at the beginning to learn to study Form before attempting to express it, as drawing is only one way of showing what we know about Form. Send to the different publishers and get specimens of their books and helps.

4. (1) The "Quincy Methods" for primary children has no equal; "Parker's Talks on Teaching" is invaluable. (2) By "School Economy" I suppose you mean ways and means. Get "Shaw's School-room Devices." All of these are published by E. L. Kellogg & Co., with special price to teachers.

Is a teacher out of order if he takes off his coat during the recitation of his classes and teaches without a coat on?

'Yes, a thousand times yes, if "out of order" means out of propriety.

When you ask for Hood's Sarsaparilla do not be persuaded to buy any other preparation.

Important Events, &c.

News Summary.

OCTOBER 1.—Report of a revolution in Guatemala denied.—Jay Gould has a stroke of paralysis.

OCTOBER 2.—Minnesota supreme court declares dealing in grain futures illegal.—The Russian customs officials will give 21 per cent. of their salaries for the famine sufferers.—Lead ore found at Badenweiler on the Rhine.

OCTOBER 3.—Gas explodes in a mine near Pottsville, Pa., and seven men killed.

OCTOBER 4.—Rise of the price of grain in the province of Madras, India, due to the failure of the southwest monsoon.

OCTOBER 5.—Queen Liliuokalani, the new ruler of Hawaii, said to be dying.—Our government makes a demand on Spain for better treatment of missionaries in the Caroline islands.

OCTOBER 6.—The king of Wurtemberg, Karl I., dies, and is succeeded by William II.

OCTOBER 7.—Canada ready for the reciprocity conference—waiting for our government to act.

OCTOBER 8.—It is reported that about 60,000 seal skins have been taken this season by British and American vessels.

THREE PROMINENT MEN DEAD.

Charles Stewart Parnell, the founder of the National Irish Land League, and the leader for ten or twelve years of the Irish Home Rule party, died October 6, at Brighton, England. Mr. Parnell's ancestors on his father's side were English, and on his mother's side he was related to the famous American admiral, Charles Stewart, who commanded the *Constitution*, in 1815. He was educated at Harrow and Magdalen college, Cambridge, and was first elected to parliament in 1875. Rapidly rising to leadership he held that pre-eminence for nearly fifteen years until he was deprived of it by his own unfortunate weakness. His opposition to coercion of Ireland and his arrest and confinement in Kilmainham jail will be remembered. Subsequently the London *Times* failed to connect him with crimes committed in Ireland. His death, it is thought, will end the divisions in the Home Rule party.

Sir John Pope Hennessey, who is a candidate for parliament in opposition to Mr. Parnell in North Kilkenny, is also dead.

The Right Hon. William Henry Smith, first lord of the treasury, and leader of the Conservative party, in parliament, died October 6. After amassing a fortune in the publishing and bookselling business, he turned his attention to politics, being several times elected to parliament. He held the office of secretary of war and chief secretary for Ireland under the Conservatives.

VENEZUELA'S BILL OF RIGHTS.

A bill has just been passed by the Venezuela congress by which the president has no veto power. The penalty of death is abolished. The absolute right over private property must be respected. The mail service is inviolable. The homes of citizens must not be entered by force, except to prevent the commission of crime, and then only in conformity with law. Personal liberty is guaranteed by the prohibition of forcible recruitment of soldiers and the prohibition of slavery. Every slave stepping upon Venezuelan territory becomes free thereby. A free expression of opinion is guaranteed by word of mouth or through the press. Travel is free without a passport.

The right of petition and of appeal through resolutions from the authority of any functionary is guaranteed. Any citizen past the age of eighteen may vote in popular elections. The government will provide for all primary instruction in schools as well as instruction in art and trades. Full religious liberty is guaranteed. No citizen can be arrested for debt unless it is incurred through fraud or larceny; nor be forced to receive or lodge soldiers in his home; nor be judged by special tribunals or commissions, but by the judges appointed by law; nor be arrested without a legal warrant unless apprehended in the perpetration of crime; nor imprisoned upon arrest more than five days without trial; nor be forced to bear witness in criminal cases against himself, his wife, or other relatives to the fourth generation in consanguinity or second through marriage; nor to be locked up with common criminals before trial; nor be deprived of liberty for political reasons. No titles of nobility, honors, or hereditary distinctions will be conferred.

TWIN CITIES ON LAKE SUPERIOR.

Things move rapidly in the West. This is exemplified by the young twin cities, Duluth and West Superior. They are on opposite shores of a wide harbor, near the mouth of the St. Louis river—Duluth in Minnesota and West Superior in Wisconsin. Duluth

rises abruptly from the lake shore as Albany and Newburgh do from the Hudson river, while the Wisconsin town is built on a prairie, like Chicago. Ten years ago West Superior did not exist; to-day it has about 12,000 people, property valued at \$10,000,000, docks from which are shipped \$28,000,000 worth of cargoes, railroads that bring grain from the vast Northwestern fields, banks, etc. Duluth, in 1880, had 3,483 population; in 1890 it had 33,115. It ships large quantities of grain southwest and does business that amounts up into the millions. This city and the one across the harbor have a wonderful future.

SANDWICH ISLANDS AND THE UNITED STATES.

A prominent resident of the Sandwich islands said lately that there was a growing sentiment among the Hawaiians for annexation to the United States. They feel that it would benefit their industries. The fact is apparent that in case the Nicaragua canal is opened these islands will be a valuable possession for the United States. Hawaii is directly in the path from San Francisco to the Occident, and a straight line drawn from the end of the proposed Nicaragua canal to Hong Kong strikes the islands square in the center.

AS A PRECAUTION AGAINST INVASION.

Arrangements are making for the enlargement of the Plattsburg barracks, authorized by congress last winter. The object of this change is to furnish a concentration of all three arms—cavalry, light-artillery, and infantry—close to the Canadian border, so that it may become the nucleus of an invading force in case of war. It would also prevent the Dominion from using its canals to introduce British gunboats and torpedo vessels into the great lakes. They are now kept out under the treaty of 1817, but the outbreak of war would be followed by the approach of scores of small armed craft to the gulf of St. Lawrence, for the purpose of using the St. Lawrence and Welland canals to obtain access to Lake Ontario and Lake Erie. Secretary Proctor and General Schofield both advocated this enlargement of the Plattsburg barracks and the establishment of a post at Swanton on the opposite shore of Lake Champlain.

NEW ATLANTIC CABLES.

The French have just begun the use of a cable between this country and South America. It extends from San Iago de Cuba to Matanzas, Hayti, thence by cable to Puerto Plata, San Domingo, by land-line to San Domingo City, thence by cable to the island of Curacao, in the Caribbean sea, to La Guayra, Venezuela, connecting with the regular telegraph system; and from San Domingo to Martinique and the French West Indies, thence to Cayenne, in French Guiana, and by cable to Vieux and Para, in Brazil. It thus opens a short and direct route from the United States to Brazil and the eastern coast of South America by connecting with the Cuba sub-marine at Santiago de Cuba and with the Western Union and American cable system in the United States and to Europe. Arrangements have been made for the laying of a cable from Jupiter Inlet, on the Florida coast to Nassau, N. P., to be in working order by December 20. At Jupiter the cable will connect with the United States government land wires to Jacksonville, Fla.

RECIPROCITY WITH CANADA POSTPONED.—The conference on reciprocity between the representatives of the United States and Canada has been postponed. It is now uncertain when the matter will again be taken up.

THE WORLD'S FAIR.—The following nations have formally accepted the invitation to participate in the Chicago world's fair and will be represented officially on that occasion: France, Spain, Great Britain, Mexico, Colombia, Germany, Peru, China, Venezuela, San Domingo, Chile, Turkey, Persia, Russia, Japan, Jamaica, Haiti, Siam, Ecuador, Uruguay, the Argentine Republic, Brazil, Salvador, Guatemala, Honduras, Nicaragua, and Costa Rica. Italy, Egypt, and the Netherlands decline to participate officially.

THE BRITISH LIBERALS.—The great National Liberal Federation congress was opened at Newcastle, October 1. The congress declared its perfect trust in Mr. Gladstone, and its belief that no wise or durable settlement of the Irish question could be made except by the promotion of one Irish legislative body for the management of Irish affairs. A resolution in favor of the disestablishment of the Welsh church, and to amend the free education act, was passed.

A GARIBALDI MONUMENT.—A monument to Garibaldi has been unveiled at Nice. The mayor of the city paid grateful homage to the memory of Garibaldi for helping France, and hailed in the patriot the symbol of union and concord between the French and Italian people.

Of Special Interest to Pupils.

THE BOUNDARIES OF THE SOUDAN.

Much confusion has arisen in regard to the Soudan, a large part of it, no doubt, coming from the fact that there are two Soudans. One is known as "The Soudan;" the other as "Soudan or Nigritia," the home of the negro race. This last Soudan is a vast territory running through central Africa, and bounded on the north by the Sahara desert, on the west by Senegambia, on the east by "The Soudan," and south by upper Guinea. It is but imperfectly known, and is under native rule. "The Soudan," of which so much has been heard of late, lies between Nigritia, Egypt proper, the Red sea, Abyssinia, and about the seventh degree north latitude. Its territory, including Nubia on the northeast and Darfour on the west, is equal to that of the eight states of Ohio, Indiana, Michigan, Illinois, Wisconsin, Iowa, Mississippi, and Missouri. Egypt commenced the conquest of this country in 1821, and it is recognized as one of its provinces, with a population estimated at about 1,000,000 or more. Its capital is Khartoum, a city of about 20,000 people, including the garrison, lying at the confluence of the Blue and White Nile, and is the residence of the governor-general of the province. Khartoum is also the center of an infamous slave traffic conducted by the Arabs. Strong slave-catching parties are fitted out here, from which point they go south or west, as they think best, each party returning with its "catch" in about a year. It is said that as many as from forty to fifty thousand captured negroes pass through Khartoum on their way to the Arabian slave-markets in what is called "a good year."

ON THE SUMMIT OF MT. BAKER.

A party from Seattle recently ascended Mount Baker, the snowy peak that forms a prominent feature of the landscape of north-western Washington. The mountain is 10,837 feet high, and is the first object in the United States to catch the eye of the American traveling westward on the Canadian Pacific railway. The party spent five days clambering over the foot-hills and ascending the steep side of the mountain. On the way many trout were caught from the brooks that came tumbling down from the snow line, and one meal was made on ptarmigans, birds that are seldom seen out of snowy regions. The last 500 feet of the ascent of the main dome is a wall of ice seemingly nearly perpendicular. The preceding climbers had to cut steps, but on account of the snow which had recently fallen, the last party were able to make the ascent with the aid of the alpenstocks.

From the summit the crater is plainly visible one thousand feet below, on the south side of the mountain. It is circular in form, about half a mile in diameter, with the eastern wall broken down, and the other walls about 1,000 feet high perpendicularly. Snow fills the space within it except in the center, where there is a circular opening about fifty feet in diameter from which steam and sulphurous vapors are constantly escaping.

The view was magnificent beyond description. To the north the snow capped peaks of the Selkirk range seemed but a few miles away. To the east Mount Shuksan and the Sauk mountains glistened in the noon-day sun, amid a sea of mountains spreading through the Okanogan country, while 100 miles to the south Mount Rainier crowned the scene. The waters of Puget sound were not visible on account of the dense clouds above it.

New Books.

A Dictionary of Thoughts.

It was a happy thought on the part of Dr. Tryon Edwards, the author, to collect the choicest thoughts of the greatest thinkers of all ages in a dictionary of thoughts. There are many dictionaries of words and they are very necessary books of reference, but such a work as this occupies scarcely a less important position in the scholar's library. There are a vast number of subjects, such as books, bores, humility, injustice, knowledge, etc., running through the whole alphabet, from upwards of sixteen hundred different persons, on which quotations of verse and prose have been made. One cannot turn over these pages without becoming convinced that the author has done his work thoroughly. The collection has begun many years ago, as a matter of personal use and reference, with no thought of publication. As far back as 1852, Dr. Edwards' collection saw the light under the name of the "World's Laconics." This was so well received that the author made further collections which we now have in this larger and much more valuable volume. Under many of the heads, such as "Burning Words of Brilliant Authors," "Great Thoughts from Greek Authors," "Gems of Thought," "Familiar Quotations," "Bits of Burnished Gold," and others, there have been great possibilities which, we think, have been effectually realized. The author has not followed the beaten track, but has gone out into paths of his own selection. The result is that there is a freshness in most of the quotations here not usually discovered in works of this character. It is almost unnecessary for us to suggest ways in which the teacher could use this book in school. Suppose she wishes to impress any particular virtue on the minds of the school, she will find in this volume what the deepest minds have thought on the subject. Suppose the pupil wishes to write a composition on any subject. He will find under that heading appropriate sentences to be quoted and plenty more to set him to thinking. The book is invaluable and should have a very wide circulation. (Cassell Publishing Co., New York. 644 pp. \$5.00.)

One of the handsome volumes in Longmans' Elementary Science Manuals series is *Magnetism and Electricity*, by Arthur William Poyser, and it was intended primarily for those who are reading for the South Kensington elementary examination in magnetism and electricity. There has, however, been enough additional matter added to cover one year of work. The author is well aware that what is studied up merely for the sake of passing an examination is of very little value, and hence he has included a large number of descriptions of experiments, which the student is to be encouraged to perform. Every experiment that demands it has been illustrated and this brings the illustrations up to two hundred and thirty-five. The book will greatly aid the student to acquire a good elementary knowledge of this difficult, though important, subject. (Longmans, Green & Co., London and New York.)

In Macmillan's Primary series we have among other text-books for young pupils *French Reading for Children*, by G. Eugene Fasnacht, which will give the beginners a long start in the acquirement of a knowledge of the French language. It contains a large amount of reading, so easy in form and substance as to be readily comprehended by those who know little of grammar. Many simple verses are included that will lead the pupil to appreciate fine

IMPORTANT NEWS FROM GERMANY.

The following extracts, translated from the CHORGESANG (illustrated magazine of music) of Leipzig, will show what is thought of the National Music Course in this musical centre of the foremost musical country of the world. The names of Karl Reinecke, Jadassohn, and Paul will be noted among those who endorse the System, and it will be particularly observed that the attention given the System in Leipzig was due purely to its merits, Mr. Mason having gone there only to study and observe:—

"That music has no nationality and has but one universal language, every intelligent man will admit, and also that Germany is master of that universal language. It therefore seems strange that from America should come acknowledged improvements in certain branches of the art. Mr. Luther Whiting Mason, formerly Director of Music in the Public Schools of Boston, U. S. A., and until recently Government Director of Music in the Schools of Japan, has devoted many years of his life to the development of the most practical system for elementary schools. For this purpose he is now visiting Europe for the fourth time. He has witnessed the teaching in various schools in England, France, Belgium, Italy, and northern and eastern Europe, but preferably in those of Germany, in order to attain his object. . . . When Mr. Mason arrived in Leipzig some three months ago, he had never thought of giving an exposition of his system. He really brought it with him in order to consult experienced musicians as to some possible improvements in it. The Germans, however, know how to appreciate a good thing, and to use it without jealousy. Through several new-made acquaintances his system became more widely known. Professors Karl Reinecke, S. Jadassohn, and Paul, the music teachers Ewald, Klesse, Klengel, and many others, interested themselves in it and recognized its value. So it happened that Mr. Mason was invited to give an exposition on the sixth of May, ult., at the general monthly meeting of the Music Teachers' Union of Leipzig. With great modesty he hesitated to accept this invitation, as he feared the judgment of such exacting critics; but he finally concluded to accept; and he may well congratulate himself for the step, for it is really the first time that, in his branch of the musical art, a foreigner has achieved such a brilliant success in Leipzig."

In consequence of this unexpected call of the German music teachers, the NATIONAL MUSIC COURSE is to be translated by a commission of musicians, and introduced into the German schools.

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points in pronunciation. The author does not believe in any of the means of phonetic transcription because all of them more or less fail. He believes that the phonograph will be of great use in representing these sounds accurately. The attractiveness of the book is much increased by pictures about which there are stories in French in verse and prose. (Macmillan & Co., London & New York. 40 cents.)

The form and style of Goethe's *Herman and Dorothea*, of which we have an edition (Modern Language series) before us, edited by Waterman T. Hewett, Ph. D., professor of the German language and literature in Cornell university, are characteristically Greek, while in soul it is essentially German. Therefore Germans always consider him the most German of all their poets. In this fact also is found an explanation of his wonderful popularity. *Herman and Dorothea* has an attractive historical background and for character drawing and description is one of the best of the great poet's works. Prof. Hewett has had such a long experience as a college professor and is so filled with the spirit pervading the language that he is eminently fitted to edit one of the great German poems. The introduction is thorough and scholarly, and treats of the historical source of the poem, the facts concerning its composition, explanations of the text, criticism of the verse, etc. The notes supply all the necessary biographical, historical, and grammatical notes, and for the benefit of the one who desires to make an extended study of Goethe a bibliography comprising works in several languages is given. (D. C. Heath & Co., Boston. \$1.00.)

The present volume is the fourth book in the *Cecilian* series, edited, arranged and composed by John W. Tufts, and is intended for mixed voices such as may be found in high schools, the higher grades of grammar schools, and even ungraded schools of the higher class. The book includes study in time and tune, part-songs and choruses, occasional, patriotic, and sacred selections. These are generally quite simple, but attractive and meritorious, and besides exercising the pupil's musical talent, will develop in him a taste for good musical literature. It has not been thought advisable to include in the series a full musical course; neither has it been thought best to admit all exercises. Those not supplied with a Normal music course will find those given here very useful. It is scarcely necessary to say anything further in favor of music in school. A school is not quite a school without its softening and elevating influences. Among the books intended to increase a love for this noble art those of the *Cecilian* series take high rank. Especially noticeable in this number are the national airs, including "America," "Hail Columbia!" "Ark of Freedom," and the national songs of Sweden, Germany, Switzerland, Russia, Scotland, and Holland. (Silver, Burdett & Co., New York, Boston, and Chicago.)

Literary Notes.

—A new edition of "Friendship," with half tone portraits of Cicero, Bacon and Emerson, will be issued this fall by Albert, Scott & Co. Their first edition was received with much favor.

—Mr. Janvier's "Stories of Old and New Spain," published here by the Appletons, and in London by Osgood, McIlvaine & Co., have been noticed very favorably in English papers.

—Among the books that Charles Scribner's Sons will publish this month are "The Divorce of Catharine of Aragon," by James Anthony Froude; "On the Border with Crook," by Captain John G. Bourke, U. S. A.; "Life, Correspondence, and Speeches of

Patrick Henry," by William Wirt Henry; "Across Russia," by Dr. Charles A. Stoddard; and "Ocean Steamships," by eminent authorities.

—Mrs. Green, the widow of the historian, has written a book on "The English Town in the Fifteenth Century," which Macmillan & Co. will bring out.

—Dr. Birkbeck Hill's edition of "The Letters of Samuel Johnson" will comprise two volumes and are nearly ready from the Clarendon Press.

—The memorial of the poet Marlowe recently unveiled at Canterbury by Henry Irving is the work of Edward Onslow Ford.

—Walter Camp's book on football as played in this country will be issued by the Harpers, with thirty-two portraits.

—Mary Lowell Putman, sister of James Russell Lowell, says the Boston correspondent of the *Critic*, is the only surviving member of the poet's generation in the Lowell family. Her eighty-first birthday occurs in December. Thirty years ago she published anonymously "The Records of an Obscure Man." She also wrote two dramatic poems called "The Tragedy of Errors" and "The Tragedy of Success."

—A "Reference History of The United States," by Hannah A. Davidson, M. A., teacher of history Belmont school, California, will be published this month by Ginn & Co.

Magazines.

—M. A. Gladstone has engaged to write for the *Ladies' Home Journal* a series of papers called "Hints from a Mother's Life," in which she will tell how her children were brought up. Mrs. Beecher's recollections of Henry Ward Beecher have given the magazine a great impetus in circulation.

—An illustrated article on the Leland Stanford, Jr., university appears in a recent number of *Harper's Weekly*.

—A chapter from "Ben" Butler's autobiography relating to his boyhood is published in the *New England Magazine* for October, with illustrations of his early home and college, and portraits of himself and his mother. Miss Ethel Parton, daughter of James Parton, has a paper on Newburyport.

—The *Review of Reviews* for October is an unusually good number. The whole English-speaking world will be interested in the fine symposium on Lowell, covering his career as essayist, poet, diplomat, and giving copious selections from his works. The articles on Methodism and its representatives will also find a very wide circle of readers, while the running comment on the principal events of the month, the many portraits of celebrities, the abstracts of articles from the leading magazines, etc., combine to make it a very attractive magazine for the man who wishes to get an idea of what is going on in the world, in the least possible time.

—The newest of important educational movements, *University Extension*, will have first place in *The Popular Science Monthly* for November. The article is by Prof. C. Hanford Henderson, and, after sketching what has been done in England, it describes the beginning that has been made in this country, and tells the plans of the extension organizers for the future.

—The prospectus of the new volume of *Pansy*, published by D. Lothrop Co., announces many attractions for the coming year, including short stories, articles, poems, and a profusion of pictures.

—*Babyhood*, the mother's nursery guide, contains articles in its October issue on "The Management and Care of Near-Sighted Eyes," by J. M. Mills, M. D.; "The Airing and Exercise of Infants," by Alfred Stengel, M. D.; "The Bones in Childhood," by Harriet Brooke Smith, M. D.; "Nursery Ventilation," etc.

—The "Duchess," author of "Molly Bawn," "Phyllis," "Airy Fairy Lillian," and other popular stories, contributes the complete novel to the October number of *Lippincott's Magazine*. There is an instructive article by John Gilmer Speed on "The Common Roads of Europe." The lesson impressed is that the matter of maintaining roads should be taken out of the hands of the local authorities and given over to the national or state governments. "With Washington and Wayne," an article by Melville Phillips, tells of the Chester valley and vicinity, and of the many historic and interesting spots that that vicinity embraces. Poems are contributed by Roden Noel, Florence Earle Coates, R. T. W. Duke, Jr., Ella Wheeler Wilcox, Katharine Lee Bates, and Helen Grace Smith.

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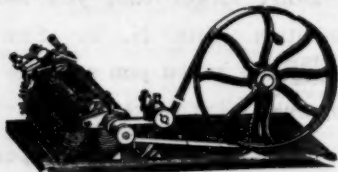
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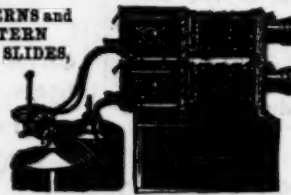
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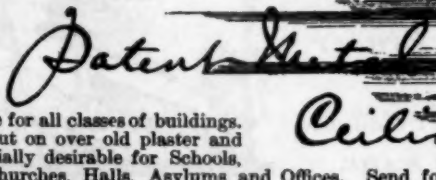
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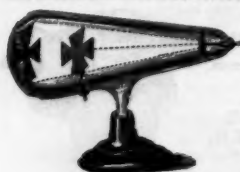
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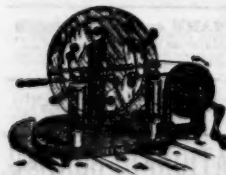
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